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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/836,164      | 04/18/2001  | Laura R. Darden      | BU9-98-118CONT      | 7963             |

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[REDACTED] EXAMINER

THOMPSON, ANNETTE M

[REDACTED] ART UNIT

[REDACTED] PAPER NUMBER

2825

DATE MAILED: 04/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |
|------------------------------|------------------------|---------------------|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |
|                              | 09/836,164             | DARDEN, LAURA R.    |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |
|                              | A. M. Thompson         | 2825                |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 18 April 2001.

2a) This action is FINAL.                  2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1, 3-7, 9-13, 15-19, 21-24 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1,3-7,9-13,15-19 and 21-24 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

|  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)              | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>4</u> . | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

This application, 09/836,164, and its Preliminary Amendment, has been examined. Pursuant to the preliminary amendment, the title and specification are amended. Claims 2, 8, 14, and 20 are cancelled. Claims 1, 3-7, 9-13, 15-19, 21-24 are pending.

### *Specification*

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The abstract of the disclosure is objected to because by merely reciting claim 1, it lacks narrative format. Correction is required. See MPEP § 608.01(b).

### *Claim Objections*

3. **Claims 1, 3, 7, 9, 13, 15, 19, and 21** are objected to because of the following informalities: Pursuant to **claim 1**, at line 5, after the second instance of "said", insert -- plurality of -; at lines 8 and 9, after "said", insert - -plurality of- -. Pursuant to **claim 3**, at line 3, after "said", insert - -plurality of- -. Pursuant to **claim 7**, at line 5, after "said", insert - -plurality of- -. Pursuant to **claim 9**, after "said", insert - -plurality of- -. Pursuant to **claim 13**, at line 6, after "said", insert - -plurality of- -. Pursuant to **claim 15**, after

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"said", insert - -plurality of- -. Pursuant to **claim 19**, at line 8, after "said", insert - -plurality of- -. Pursuant to **claim 21**, at line 4, after "said", insert - -plurality of- -. Claims dependent from the objected-to claims are likewise objected to based on their dependency. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Rejection of claims 1, 3-7, 9-13, 15-19, 21-24**

5. Claims 1, 3-7, 9-13, 15-19, 21-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Kawakami et al., U.S. Patent 5,062,054. Kawakami teaches a layout pattern generation and geometric processing system for LSI circuits.

6. Pursuant to claim 1 which recites [a] process of testing spacing of wiring in a circuit (Abstract; Fig. 9, #36 illustrates a Spacing Check Unit) comprising forming a plurality of conductor rectangles representative of conductors of said circuit (col. 4, II. 35-57); forming minimum spacing rectangles around said conductor rectangles (col. 4, II. 58-64), said minimum spacing rectangles being larger than respective ones of said conductor rectangles (Fig. 12); identifying a possible rectangle when a first conductor rectangle of said conductor rectangles occupies a portion of a minimum spacing

rectangle of a second conductor rectangle of said conductor rectangles (col. 4, line 65 to col. 5, line 50); checking whether said possible error rectangle is a true error (col. 6, II. 17-46); and reporting said true errors (Fig. 9, #71; Fig. 11, #92; information is sent to an error file, col. 6, II. 39-43).

7. Pursuant to claim 3, wherein said forming minimum spacing rectangles comprises forming said minimum spacing rectangles to have sides which are a minimum spacing design constraint distance from sides of respective ones of said conductor rectangles (see Figs. 6, 10; col. 4, line 40 to col. 5, line 31).

8. Pursuant to claim 4, wherein said conductors are within a single net (col. 2, line 60 to col. 3, line 15; col. 6, II. 17-46).

9. Pursuant to claim 5, wherein said circuit comprises a plurality of nets and said process further includes checking for shorts between different ones of said nets (col. 9, line 55 to col. 10, line 32).

10. Pursuant to claim 6, further comprising dividing said possible error rectangle into at least two possible error rectangles if said possible error rectangle is partially covered by a third conductor of said conductors (col. 10, II. 19-22; step 10).

11. Pursuant to claim 7, which recites [a] process of testing spacing of elements in a structure (Abstract; Fig. 9, #36 illustrates a Spacing Check Unit) comprising forming a plurality of element rectangles representative of elements of said structure (col. 4, II. 35-57); forming minimum spacing rectangles around said element rectangles (col. 4, II. 58-64), said minimum spacing rectangles being larger than respective ones of said element rectangles (Fig. 12); identifying a possible error rectangle when a first element rectangle

of said element rectangles occupies a portion of a minimum spacing rectangle of a second element rectangle of said element rectangles (col. 4, line 65 to col. 5, line 50); checking whether said possible error rectangle is a true error (col. 6, II. 17-46); and reporting said true errors (Fig. 9, #71; Fig. 11, #92; information is sent to an error file, col. 6, II. 39-43).

12. Pursuant to claim 9, wherein said forming minimum spacing rectangles comprises forming said minimum spacing rectangles to have sides which are a minimum spacing design constraint distance from sides of respective ones of said element rectangles (see Figs. 6, 10; col. 4, line 40 to col. 5, line 31).

13. Pursuant to claim 10, wherein said elements are within a single net (col. 2, line 60 to col. 3, line 15; col. 6, II. 17-46).

14. Pursuant to claim 11, wherein said structure comprises a plurality of nets and said process includes checking for shorts between different ones of said nets (col. 9, line 55 to col. 10, line 32).

15. Pursuant to claim 12, further comprising dividing said possible error rectangle into at least two possible error rectangles if said possible error rectangle is partially covered by a third element of said elements (col. 10, II. 19-22; step 10).

16. Pursuant to claim 13, which recites [a] computer system for testing spacing of wiring in a circuit comprising a unit for forming a plurality of conductor rectangles representative of conductors of said circuit (Fig. 1, #11, 32; col. 4, II. 35-57); a unit for forming minimum spacing rectangles around said conductor rectangles (Fig. 1, #33, 34; col. 4, II. 58-64), a unit for identifying a possible error rectangle when a first conductor

rectangle of said conductor rectangles occupies a portion of a minimum spacing rectangle of a second conductor rectangle of said conductor rectangles (Fig. 1, #36); a unit for checking whether said possible error rectangle is a true error (Fig. 9, #34-36); and a unit for reporting said true errors (Fig. 9, #71).

17. Pursuant to claim 15, wherein said unit for forming minimum spacing rectangles comprises a unit for forming said minimum spacing rectangles to have sides which are a minimum spacing design constraint distance from sides of respective ones of said conductor rectangles.

18. Pursuant to claim 16-18, it addresses the limitations already rejected in claims 4-6, supra, and therefore claims 16-18 are likewise rejected for the same reasons under this code section.

19. Pursuant to independent claim 19, this claim addresses the limitations already rejected in claim 1, and further includes the limitation of a computer program product (col. 4, ll. 4-8 and col. 1, ll. 47-50) comprises a program storage device readable by a computer system tangibly embodying a program of instructions. Kawakami includes this additional limitation and therefore claim 19 is rejected based on the same rejection rationale as claim 1.

20. Pursuant to claims 21-24, these claims address limitations already rejected by claims 3-6, supra, and are therefore likewise rejected for the same reasons under this code section.

***Conclusion***

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please see the PTO-892 for a complete listing.
22. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to A.M. Thompson whose telephone number is (703) 305-7441. The Examiner can usually be reached Monday thru Friday from 8:00 a.m. to 5:00 p.m.. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Matthew S. Smith, can be reached on (703) 308-1323.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956 or the Customer Service Center whose telephone number is (703)306-3329.

23. Responses to this action should be mailed to:

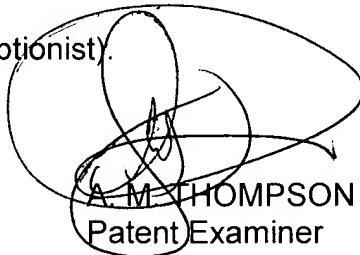
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or faxed to:

(703) 872-9318, (for **OFFICIAL** communications intended for entry)  
(703)872-9319, (for Official **AFTER-FINAL** communications)

Hand-delivered responses should be brought to Crystal Plaza 4, 2021 South Clark Place, Arlington, VA., Fourth Floor (Receptionist).



21 April 2003